

MAY
AUG

1985

- Encounter Micueta/Vera
Ron Rita
- Vera catches frog
- 1st Pesagro description
- Bromeliad study
- Day in field w/ Carlos Perez
- Release of Wichita + No.
- Poor locomotion of Butterscotch
- Conflicts between Ben/ Jim + D.
Specifics of training procedures
- First Microman. platform
and protocols for feeding OLTs
- Pesagro living + working - The Padua visit
- Visit to UNA: compare forests

Pol *

Ecol *

Carlos ♀ + ♂ copul. Thurs.
Mc + V. cop. Thurs
4hr Encounter between

Reintr *

Cons *

Edu *

People *

8.4 $\sqrt{2,000,000}$

BRASIL 1985

Trips to Brazil

Visits

Date	Duration	Location
June 1975	~ 2 weeks	Rio de Janeiro
June 1975		
with Miller, Meier for Zool. Conf. with Bush	June 1982	2 Caratinga, Rio Brasilia
Beck, Cohen	June 1983	2 Rio de Janeiro
Beck, Cohen, Patz, Dietz + Oak	May 1985	1 Rio de Janeiro
	July 1985	3 Release Belo Salvador, Ilheus
	Feb 1986	3 Rio Brasilia
	Sept 1986	2 1/2 week Rio Brasilia, São Paulo

27 May 85. Dept. on PA 201
Arrive @ 1 hr late in
Rio after long tiring
flight — totally packed
with people.

Picked up by Jim + Inez.
Straight to Reserve except
waylaid for @ 2 hours
with Jim trying to find
new tires for the Kombi.

Finally find them halfway
to Reserve.

At Reserve are Jim, Lou Ann
Inez, Beth,

Laurenz is off + Carlos Perez
is in the field.

There are two ^{young} botanists working
on bromeliads +
luring in Silva Jardim.

A soon-to-be-married couple.

Also Photographer Randy Hyman
+ Writer ~~Ala~~ d'Aulaire

from International Wildlife,

come to write article about
OLT project.

26 May 85

M + Vera
Encounter with Ron,
#9 + Rita

26 May 85 Sund.

Awaken relatively late -
Slow beginning



10⁰⁰

Two groups meeting
Nicoeca + Vera
Rita (muffled)
visible

M. vocs.

Later M + V together
on > 5 cm branch
Rita + Ronaldo (T4)
visible + N. quietly
goes for them.

10³⁰ - 12³⁰ M + V + kids
moving towards Viv 2
area
foraging

M. tests bromeliads curled
dead leaves, bark

went into field @ 0930
with Inez, 4 assistants, &
Jim.

The two groups of apts.
are divided, one to follow
each group.

Each ^{tamarin} group has one animal
collared — (#1) Ron (#2) Vera

Group #1 = Ron, #9, and
wild-caught young ♀
Rita.

(Rita was a pet who was
confiscated & who Jim ~~stole~~
released after Sentinel &
babies died, in order to
make sure that Ron & #9
stayed in the area)

Group #2 = Micoeca &
Vera + 2 I. (born Feb 85)

When we come on the two groups, they are in the midst of an encounter. Possibly had been going on for a while.

Two groups get within 10-15 m of each other.

Vera + Micoeca close together, Micoeca long-calling + chattering!

Rita is huddled, pro-erected + making infant rasping sound.

Encounter mainly visual + vocal. No tactile interactions. Micoeca, however, scent marking up a storm, including sternal + CP marks along diagonal branches.

Then at one point, Rita + Ron are present +

micocera very quietly
goes towards them &
They disappear.

Then M + V meet up with the
young. I had n't seen
them till now.

And they all begin to move
off foraging.

I'm impressed with

- ① Their tolerance of people
including micocera + /
infants.
- ② The variety in their foraging
strategies.
Where they search;
They look in bark, curled
leaves, bromeliads
They seem to catch a lot
of ~~off~~ insects +
invertebrates, but
also are eating lots of
buds + fruits.

Also perhaps, they are testing
foods more than I would
expect, but they often
take only a bit from a
plant and move on.

About 1300 hours Vera is
on the ground micro manipulating
at the base of a small tree.
She shoves her hands in ~~the~~

between the roots and
eventually pulls out a frog;
about 10-20 g in size

She had been reaching
under the roots for > 1 min.
Clearly, she had seen it
on the ground, suggesting
incredible sight for
movement.

While Vera eating her
frog, Jim arrives w/
I.W. water + photog.

Spend the next 1 1/2 hrs
trying to ^{keep} separate Vera
+ the kids.

Jim wanted to tag +
mark the infants since they
are not identifiable
anymore.

Also hoping to weigh Vera
since she has only recently
quit lactating and looks
somewhat thin + a bit
ragged — altho her
activity + movements are
excellent.

Eventually one of young
Brazilian assts (Zeke) (Zeque)
manages to mark one infant
by attracting it with a banana
and using syringe to
squirt it with Nyanzol dye.

Vera had been hanging
around people since
we were waving bananas
at her trying to
separate her from
Micoeca + the infants.

26 May 85

Vera weight

636g — transmitter

= 608g

Previous weight

19 Sept 83 (before shipment) 620g

27 June 84 (process) 657

26 OCT 84 (affix radio) 646

4 Nov 84 " " 637

Birth ~ mid Feb 85

29 May 85 608g
(Post lact)

We then got Vera
into a trap + Jim
weighed her
1st in trap,
Then in plastic sock.

Weight between 636 + 650;
first probably more
accurate.

Vera is wearing a transmitter
and shows some hair loss
where the ball chain
rubs on her neck.

Since transmitter is about
30 gms. weight is probably
about 600g; which isn't
too bad considering.

Spoke with Carlos Perez.
His study group is 40%
changed from previous
years. ♀♀ remain
but completely new males.

Carlos was to be studying

foraging of the group,
depending on familiarity
with the area, but
needs to formulate new
hypotheses.

Unfortunately, whatever
he does, he won't be able
to test hypotheses that
are reasonable because it is only
one group.

Laureny is tracking 2
sloths now, but has few
marked. Would like to
pursue it further w/
WWF funding.

Inez is supervising & working
with the young Brazilian
assts. on the released
animals. They continue
to collect daily data
by scan samples + focal
animal observations.

In Evening into Silva Jardim
since young conservation group wants to
have surprise B'day party for Jim.
We eat, eat cake; They samba —

27 May 85 Mond.

Jim & I drove to
Silva Jardim & then to
Pes Agro site (owned by
RJ state agricultural people)
to check on possible release
sites.

There are 2 patches of
forest separated by a
smaller patch (~10 ha)

Ⓐ ~ 1 km² and Ⓑ a larger site
(rectangular) (rectangular)

Pluses

- ① 6 room laboratory with
water, no electric at
site — Equiv. to PDA
facilities
- ② state owned & supported
land — support of officials
- ③ Big blocks of forest
- ④ Can release both groups in same site

Negative

- ① Hunter prevalent
- ② Orange grove next door

③ Use of insecticides

④ Patch (A) ~~too dry~~
is too open + dry -
field man feels that
it's not good forest.
Doesn't feel that good when
Jim + I are inside.
Patch (B) is better, but
~~it~~ is ^{also} ~~more~~ vulnerable
to hunters + disturbance
bordered by orange grove,
privately owned.

⑤ GLTs present in ~~the~~
Patch (B)

⑥ Site is 30 minute
drive from hdqtrs.

We see at least 3 hunters
platforms + baiting stations
in the woods.

Not many bromeliads in

either woods.

~~Jim + I return after
lunch + I sit and talk
with~~

Jim + I start back
with Elpidio + the Corcel
goes out just as we start to
leave Silva Jardim.
Bump into Lou Ann + Beth
on their way into Silva Jardim.
I go on with Lou Ann while
Jim gets car fixed.

She is headed to a govt.
plant nursery to see if she
can get plants (some trees)
donated to schools for
planting as a prize for
essay/drawing contest.

Jim shows up + we leave
for Reser.

Call Hotel Meridien +
try to find Dra Rubnoff.

Buy bread + back to bdgnts.

Sit and talk to ^{per} Ola d Aniere
re's project before dinner.

~~Then talk~~

Previous evening talked
~~Then talk with~~ briefly with
The young couple working
on bromeliad biology.

They have charted
size, + height of
bromeliads in
Dietz Portuense area +
have already noted that
there are fewer bromeliads
on the hillside relative
to the swamp.

They are then collecting
10% of bromeliads (have collected
@ 50) and are looking
at species IDs and all
potential animal prey for GLTs
within each bromeliad.

Tuesday 28 May 85

Into field with Carlos Perez
by 0600 hours. He cannot
locate his group for about
40 minutes since bad connection
on receiver.

Meanwhile climbed to
top of hillside + astonished that
I made it. Carlos + I
walk down again + he
discovers misconnection.

GLTs in breggus.
We slog thru swamp / mud
down in lowland and
Carlos locates the GLTs
in a *Calophyllum* tree feeding
on nectar.

He shows me a tree at
whose base is an area
where GLTs fed on exudate.
Carlos says that ~~GLT~~ he has
seen GLTs bite on branch / trunk
and to induce exudate flow.

also groups very different from 1984.

Adult σ^7 /SAO σ^7 have totally turned over -

Two new males with group and σ^7 include original reprod. σ^7 & a juvenile/
~~SA~~ σ^7 (an infant last year) and ~~a~~ a ~~juvenile~~ juvenile probably born in 1984/1985.

During observations, we note that the σ^7 SA σ^7 is hanging around the heavier, larger σ^7 , and discuss Carlos already established theory that the group dominance has changed.

I explain that observed sexual social interaction may be misleading e.g. reproductive pairs may show little social

interactions (Carlos next day sees
He A \rightarrow copulate with the younger ♀).

I also hit Carlos on several
issues w.r.t. over-speculation,
and discuss how to prove
certain points; The kinds of
data you need to collect.

Carlos group uses almost
entirely tree holes & he hasn't
seen them using trees
for sleeping. Altho Jim
thinks some other groups don't
always use cavities.

Carlos showed me a cavity
that eventually was useless
when the tree fell or
cracked ~~into~~ in half.

Returned to Edgar's and
sat in on discussion between
Ola & Jim.

Lon Ann had her judging

of essays and drawings
longer from the towns
of Silva Jardim -
Charmim de Abreu

Yves Hublet + Dionizio
as well as the heads of
The municipalities +
schools were judging.

The essays + drawings
were to relate to conservation
problems as well as GLTs.

Later saw Japanese film on
GLT + chrysothrips

Dinner + then initiated
discussion w/ Jim
Carlos Laurence Inez +
Zeque re: what we
know about GLTs
and what kinds of
data need to be collected
to prove certain points.

OK has initial note
original

we covered censusing in + out
of Reserve + total #s
of animals, home range size,
daily activity budgets,
daily path lengths,
composition of diet, tree
holes, bromeliad use.

I felt somewhat stiff at
beginning + praised
Jim + LAO as well
as students. Gave
everyone a lecture @ how
good they were + what
a unique project they
were part of while Int. Wildl.
winter et al were around.

Laurely participated in
the discussions more than
I expected as did Orey.
Carlos didn't dominate +
listened to everyone.

We drank brandy + coffee
+ got exhausted + loud.

Wed 29 May 85

Stayed in to talk to Inez
re: reintrod. data
summary techniques.
They have plotted the
carrying of the babies in both
reintroduced groups. Also
talked with Inez about her
future at school in U.S.

@ 1030 hrs. Dra Rubinoff
(Director STRI) arrives.
He's in Rio since wife
Annabella has a conference
of duty free dealers at The
Hotel Meridien - Copacabana
(apparently one of the fanciest)

Dra hired a driver + car
and we had sent him
directions to Mr. da Silva
The Int. Wildlife writer.

Dra is somewhat uncomfortable,

and mainly seems interested
in talking Washington
politics.

We have some lunch +
take him out to the Pedreira
study area to see some GLTs.

We find the observers with
Ron (with collar) #9 +
Vita in some of the scruffiest
second-growth shrub vegetation
ever seen. Thick + hot +
miserable. But Ron
manages to see GLTs close
up and the animals are
relatively calm.

The young (wild-caught but)
compensated ♀ Vita
nags at all of us as
though food-begging,
but she doesn't follow.

Ron is full size
(now ~ 15 mos old) and
looks superb with a
lustrous coat and
excellent color. No more

shut-eating!

Getting thru the 2nd growth tangles is a pain. I think we came on the animals during a resting bout, but they eventually begin moving and are more visible.

Return to house + bid goodbye to Ira.

Ira, altho in Tropics for 20 years, is uncomfortable in forest, and had new shoes + no field clothes.

Jim said he thought he saw a glimmer of interest when he was about 2 feet from a GLT. Otherwise discussions were of the cocktail party variety altho I tried to get Jim + LouAnn

to explain what they were doing.

Spent remainder of PM
talking with Jim about
variety of subjects.

Chronology of animal histories.

Future of project

Future for Jim + LonAnn
next year

Developing agreements for
rights in data.

Dinner - Everyone amused by (Zek)
Zek since he eats
everything. LonAnn not
home for dinner but
shows up later.

We continued discussion

(a) what we know about GLB
but everyone fags out.

Thursday 30 May 85

Talked more with Jim
Lou Ann Laurens

- ① Jim re: future
contracts with students
 - ② LA in evening re: budget,
Beth's future
 - ③ Laurens re: school in US.
- Didn't get out all day

Friday 31 May 85

Went out to see Vera Micoeca
+ kids in A.M.

Raining lightly and grey.
Probably the first rain
I've seen in Brazil;
despite the horror stories I
hear from Jim + LouAnn,
the weather has always
been exquisite.

Despite receiver + transmitter
it takes about an hour for
buzz and I to find the ourselves.

Jim has a new road
past the house which leads to
the other side of the viveiro
site.

We walked in thru grass,
low stature forest and
circled a low hill to

find animals,

Takes forever to locate
them up + down hill
and I nearly lose myself
+ Inez a few times.

Leave after obs for
town.

Supposed to see Claudio
Savaget (cancelled)

and Yves Hublet with
some TV man.

TV man doesn't show so
we go on after brief chat
with Yves.

Check in Novo Mundo +
out for dinner at
Coimbras.

Jim + Coimbra have
exclusive conversation.
It's bizarre, but

Jim later reminds of a
similar dinner at my
house where Mike
Robinson & I dominated
the conversation w/ each
other.

Otherwise dinner OK and
Dietz apologizes profusely
on the subsequent day.

Sat. 1 June 85

Shopping in AM. I
buy some excellent leather
bags for gifts.

Lunch w/ Berant

maracujá batidas which
knock us dead.

Chicken + homemade
vanilla ice cream w/
chocolate sauce.

I end up stuffed.

More shopping at Sao Conrado
before → airport.

Pan Am screws up again.

Miami flight is cancelled.
Thus every seat on Kennedy
flight is booked solid.

I don't sleep.

Jessie Cohen,
her.

ly awake since I
one (although
ied as usual

straight to
initial problem
run Customs
- gear.

Ben Beate Drey
from a
garden kids.

la have decided
to celebrate
me's birthday
must be
being batidas

back to

21 July 85

Arr. Rio w/ Jessie Cohen,
NZP Photographer.

Feel reasonably awake since I
slept some on plane (although
every seat occupied as usual
on Pan Am).

Jim drives us straight to
Reserva. Some initial problem
getting Jessie thru Customs
with her camera gear.

At Reserva are Ben Beate Inez
Betty, Lou Ann + Jim + a
million Silva Jardim kids.

Epideo + Xixinha have decided
to have a party to celebrate
daughter Eliane's birthday
(4th). There must be
20 people drinking batidas
etc.

I decide to go back to

Resago with Ben, Kate, et al.

Note: Prior to ~~leaving~~
getting to Resago, stop
for churasco w/ Jim &
Jessie.

During Elane party decide
to hit CAPT in the AM,
since Ben & I figure
that we won't have another
opportunity..

22 July 85

Went out w/ B + B +
Jessie to check out vivveros +
animals.

Wichita group looks
clumsy. They're the untrained
group — No locomotion or
feeding preparation. Still feeding
from bowls etc. Not
using as much wood + wire
as expected; although their
wood + wire is limited.

New Orleans group looks
better. We go thru some locals +
a feeding. They immediately
start micromanipulating,
looking for food.

They are so much more active than
the Wichita group.

About 10:30 we head out to
CPRJ — w/ B + B; Ques;
and Andy. Jessie stays

back to get shots of animals
in vivarios with Cibell Carvalho

I mention to Ben that Russ
Mittermeier is arriving with
journalist Don Jackson in the AM.
Ben predicts (rightly, eventually)
that Russ will shoot CPRT
first thing.

We arrive to see Passanatti +
Roberto. Indeed Coimbra hasn't
arrived, even tho it's Monday
(only visit Mond. Wed. Fri)

We have a look at the hospital,
nutrition lab + a few other
sites before Coimbra arrives
with Russ, Don Jackson +
Claus Meyer (Brazilian wildlife
photographer).

Unusual Coimbra — ~~rooms~~:

① *Saguinus bicolor bicolor* x
S. b. martinsi
(latter a bicolor w/o any
white on head, throat, +
shoulders)

② *Chiropterus satanas satanas*:
an all black saki

③ Several 50 hybrids of *Callithrix*:
including *jacchus*, *goethoi*,
penicillata, *kuhli*, *flaviceps*

④ some lovely *flaviceps* — male +
infant. 1 single female waiting.

⑤ Breeding *C. aurita*

⑥ Reddish *chrysopygus* — look like
rosalia.

⑦ Golden *chrysomelas*.

Coimbra's had 6 dead
rosalia this year so far.

Passanatti bites ~~the~~
because

he cannot do anything
with animals. Coimbra
won't let him touch
anything

Roberto shows up looking
spacy as always.

Russ shows up w/ Don Jackson +
Clara Meyer (Brazilian
photog). They've just
flown in and Russ' pants
are covered in spirit
spilt ink from a pen
(ballpoint). I thought
he had taken suit and
turned it into field gear.

Turns out, they were good
suit pants and he's ruined
them.

Jim impressed by the
similarity in features
between Clara Meyer +
Don Jackson. Same size
+ grossness.

Meyer keeps having Ben Russ,
Coimbra + me walking
around (8 times) CPRJ
looking as tho we were
discussing important matters.

CPRJ looks the same.

Lots of freaky looking
animals that change
from visit to visit.

Pissmatti complains that
the keepers spend too much
time keeping the grounds
up. No time for animal
maintenance. Lots to
create a showpiece.

Coimbra building 2 important

structures.

① Muriqui cage: no input from outside - Concrete base - fencing wire - 2 catch cages on either side. Like London's gibbon exhibit. Cost horrendous for Brazil: \$15,000 from WPTI plus another \$8-10,000.

Pessinatti estimates whole job will be \$25,000 a horrendous amount since the whole quarantine hospital cost $\frac{1}{2}$ that amount.

② Guest house - Souza Cruz put \$ into building a guest house — in which Coimbra will only house very special guests

eg Russ Train - the WHF we have chumasco for dinner at Cancho near Silva Jardim.

23 July 85

up early for wake-up with Ben at Wichita.

[Recommend Int. Mgmt Comm. for captive muriqui — argued w/ Ben whether it was best to support Coimbra downfall ~~the~~ thru ignoring advice or maintaining Coimbra thru Mgmt Comm. + advice]

To Silva Jardim w/ Inez + Jessie ~~to~~ to shop — mail, food, etc.

To P.d.A. — Caluromys in the chicken coop —

Discuss w/ Lou Ann + Jim budget

Problems w/ Betty Howser +

budgets + getting anything done.

Go out with Jessie to Vera Micaela + kids to photograph.

to Elizama + Mary following family. They are right at bait station when we arrive + Jessie has a breeze getting photos.

Problem: Vera stimulating anogen + eating feces.

Apparently due to banana eating [Vera almost dead + Jim "saved" + revived her! had been baiting]

Quiet Jessie + I return to Pesagro to process Wichita.

Animal processing goes simply except it turns out that there has been a mix-up in IDs of dominant breeding ♀ and her daughter. Jackie — mother — is probably ~~mother~~ Jackie's daughter.

Jim + I + Ben get high after processing — which goes simply — while deciding how + when to release Wichita group.

Decision to release Wichita first based on their being

disadvantaged ——— not trained.

But we need to decide how & when
to remove the viviers —
where to put the nest box
how to provision with food
(we decide on concentric circles
at directional points of SNE,
10 SW etc.).

Processing animals at Pesagro
is simple once organized.

And Jim organizes it.

Jackie vs Maria clear up based
on
① teeth
② nipples ③ sternal + egg gland
④ pregnancy ⑤ Arch
walk frequency ⑥ other
behavior ⑦ in + out
of nest box

Decided on how + when to release
with Ben + Jim
Jim + I leave high (pinga +
wine) + late —

Day ① Wichita
24 July 85

Stayed night at PdA +
returned in am for 1st release
of Wichita.

Had a million people hanging
around.

Release @ 13³⁰ — Day is
cloudy + periodically raining.
Takes us forever to get
organized.

Needed to make concentric
circles in 5m intervals at
8 compass points (E → NE → ... SE)
for ~~barbage~~ ^{putting} randomly distributed
foods

Eladio + Antonio start
unfastening roof of cage.

We ~~also~~ realize that the animals
were released about 1240 after
I note that there was a
hole already in the roof
of the cage.

The Wichita group, however, do not see the hole and stay within the vvereiro. Maria is first animal out @ 13⁰⁰ hours. By 13⁴⁰ all animals out except Pepe who moves slowly and seems confused.

Maria alarm calling:
The group starts chirping.

The Wichita group are remarkable for their lack of micro-manipulation. They show almost no exploratory behavior in small holes + under bark. Their locomotion is surprisingly good, considering their most recent environment; NZP quarantine.

They have, however, no social behavior! Maria is an outlier + doesn't interact w/ the group. The young male Juan with the stub tail begs, steals, etc food from everyone.

Jackie H Maria H Juan V Pepe J

Maria is walking frequently when in Jackie's presence, suggesting lots of conflict between mother & daughter, assuming that Maria is the mother.

Day very confusing with too many people around.

Ben Jun & I keep trying to decide how to define a dead tamarin. And what we are trying to do.

- (1) Document difference between New Orleans & Wichita group
- (2) Initiate a rapid training procedure for Wichita & New Orleans (if necessary)
(We do not know if N.O. knows enough to survive)

We have no food & go into town to eat pizza, but end up at The S. Tardim' hotel for dinner.

Day 2 Witch

25 July 85 Thursday —

I start with focals + feeding data on the Wichita group. One training me in distances + the recording techniques.

Bigest difference is that the recording is in Portuguese.

I need to learn enough to do focal animal observations, scans etc. in Portuguese.

Cibele also works w/ us.

Wichita find a few feeding sites, but tend towards inactivity. They do not act like a family group, which is sad.

We see a rainbow which is beautiful, but day had started poorly.

① Beate was arguing with me about how many grams in a lb.

Then Jim arrived + told me that Zeke had heard that the DC Grant Panda I had died.

The news (which was incorrect — apparently it was the London ♀) depressed me in a strange way.

I wanted to be alone for a while + decided to return to make more coffee.

I could barely do it since there was no coffee left (hardly) + I couldn't find anything I needed for the task.

I felt incredibly frustrated + certainly not very elated about the released animals. They posed more problems which needed decisions ^{with} which we had yet to cope.

Jim had to go to town

to phone Telonio & eventually
learned that it wasn't him.

[Everyone was terribly solicitous
when they thought it was my dead
panda.].

Andy & I went over to
the New Orleans group to
set up the 5-10-15 m
concentric circles for
food so that we would be
better prepared for the release
of the N.O. animals.

It was rainy & cold most
of the day.

While putting out the food sites
locations.

Ben came in with traps.
We trapped the entire N.O.
group & processed them in
the Pesagro kitchen in
the afternoon before the sun
went down.

The processing included
Dietz, Ben, Andy & me.

Jessie took pictures.

We left the animals in the kitchen overnight.

Dnes cooked dinner while Beate cut Ben + Andy's hair. Dinner good; got a bit high.

Cibele Carvalho made a fire + we sat and drank maracujá batidas for a while. Everyone seemed to be feeling good.

Day ~~2~~³ WSHL
Day ~~1~~¹ N.O.

26 July Friday

Cibele runs back to house while everyone preparing to go out. She had done a wake-up on the Wichita animals and one ♀, Jackie, had been vomiting for 4 minutes and looked bad.

I went out to look a bit before Ben. ♀ no longer vomiting + seems active.

This group a bit bizarre because they feed on sticks + twigs, hungry or full — Jackie may have upset her stomach which was not full.

I began observations with Dnes + Cibele, and came to a point where I contradicted some of Ben's instructions.

It involved the fact that the ♀ Jackie was hungry + the group had found Science diet, but

she hadn't had any. Instructions involved adding food, and I said no — not while animals were sitting & watching.

Cibele got further upset & thought we (I) was starving Jackie.

It all eventually got worked out w/ talking with Ben Jim, etc. And generally agreed that Cibele upset because of tamarins, of leaving project, of leaving friends, of ~~not being~~ projecting emotions onto animals.

Decided to release NO. group after Dietz arrival @ 1030.

I stayed back to continue Wichita obs. while NO released.

Then organized (w/ some confusion) and perhaps bad feeling for Ezekiel to take Jessie back to Reserve to photograph road, dam, fire breaks, Aristedes, etc.

Aristedes is squatter with horses & pigs who left Reserve after hernia operation but is now back deforesting area — and has rights thru grandfather clause — or at least he is claiming so in court.

Ben Jim & I spend some tense moments trying to decide difference between a Theoretically & really dead tamarin — and how to decide when expts are over & we pull the plugs.

Jim pushing hard for pulling supplementation early & letting animals die.

His concern is expressed as developing the cheapest most efficient method for infecting germs, but ends up with his worrying about lives, money, people, food + time.

He's leaving soon, and needs to develop plan for how much + how long to continue feeding.

Other problem is that students + assts need to have exact instructions with exact alternatives + rationals for different decisions. I doubt that Jim wants to take full responsibility for it.

Jessie sometimes on top of it. Sometimes seems very non-adaptable.

The vehicle problem is horrendous. Jim + I return

To PdA. Jessie was real pleased since she'd gotten excellent shots of Bruckes. Had her first experience of an authentic Brazilian!

Meanwhile carburetor on Kombi "The Nun" had died or clogged and only one car was really operational...

This is with 4 vehicles! Including 3 combis (one alcohol, one used gas, + one very used!)

Jim decides to stay at PdA in morning (next) + I'd drive Jessie back to Pesagro.

Distance between Pesagro + PdA ~~the~~ is a pain + lack of fridge + constant need to buy food in Silva Jardim is also a problem.

Lou Ann just finished 2 day
course in ecology +
conservation for ~15
teachers from municipality
of Silva Jardim. Mainly
elementary + junior high teachers.

She seemed calmer at dinner
(I've hardly seen her since we
arrived).

Dinner included Carlos, Lou Ann,
Jim, 2 education women, ~~E~~
Ezekiel + Jessie.
(Snelli; Margarida)

Living at Resagio:

Coldest showers in the world
Water always needing to
be pumped

No fridge.

Sleeping on thin mattresses
on the floor w/ Cibele
Ines, Jessie,

Andy sleeps on kitchen floor.

Day 4 with
Day 2 NO

27 July 85 Saturday

I drive Kombi (Nun) from
ADA. to Resagio with Jessie.
We arrive @ 0745 since I
had to pick up Silva Jardim
observers at 0715. It is
my first big drive in Kombi
and I'm relieved that there
are no problems. Assistants
include Elizama, Paulo, +
Elizao.

I go straight out into field to
do feeding data with
Beate while Elizao + Elizama
do scans + focals.

New Orleans group youngsters
locomote beautifully and do
lots of micromanipulating.
Wichita group doesn't move
and never micromanipulates.

But N.O. is not finding
as much food as we
would hope altho it seems

to be enough to keep them
full. They find banana, papaya & ^{some} ~~fruit~~ ^{diets}
Interestingly, every time they
find a food source +
explore it, they seem to
decide to go to sleep on or
in nest box.

Thus they aren't ranging very
far from the nb. Lancelot
falls @ 10m from the top
Ben + Beate clearly feel
that they are doing well
(except that by Sunday,
Ben is getting worried +
decides to weigh animals
on Monday)

N.O. group, especially
Butterscotch, may not be getting
enough nutritious food.

Butterscotch spend incredible
amount of time near ground,
searching (especially on
Sunday 28 July)

All the assistants, including
Andy Baker + Ines leave about
1400 to prepare to go to
Rio for Ricardo + Helene's
wedding.

Dietz comes in + for
dinner we have beer
+ Jessie cooks an
incredibly good Kung Pao
chicken with Chinese
vegetables.

Everyone else goes to wedding
(except Carlos)
Lon Ann ~~with the others~~ + Zedue pfe

Ines, Andy, + Silva Jardim
people Mary Eliza, Elizama,
Ezekiel, Paulo; ~~the~~

Don't know how they all fit
in.

Day 5 with
Day 3 No.

28 July 85 Sunday

Ben does wake-up on NO and
I meet him at 0700.

Ines arrives @ 1000 AM ✓
Andy goes to work with
Beate on Wichita.

Everyone had a good time at
wedding. Ines eating lots
of candy.

During NO observations,
animals getting food sites
are mainly Hera & Venus,
2 young ♀.

Parcelot (father) & Butterscotch
(mother) are very quiet
and often seem vigilant
at opposite ends of where
the young sit.

Thus parents seem to keep
young between them.

Butterscotch does incredibly poorly on her locomotion in terms of finding pathways to a goal. She several times got to a good site much too late to feed on it except for picking pieces off the ground.

The group seems to be active in spurts, but still get little pay-off for their micromanipulations behavior.

Hera finds one or two grasshoppers: Butterscotch perhaps one.

Also they seem thirsty.

~~At 2:00~~

Dietz arrives about 2 PM + I prepare to leave for PdA, with Jessie to help her get final pictures.

Dietz has brought Xixinha, Edmar + Eliane as well as Carlos to see the released animals at Pesagro.

On way back, we stop at Silva Jardim where a baptism is in progress. About 10 teenagers are being baptised and it seems that nearly the whole town is there.

Back at the house, Jim + I test about 4 new bottles of different pingas — which Jessie photographs — and have the smallest dinner ever at PdA. Present are Jessie, Deb, Lou Ann, Jim, Carlos + Zeke.

Everyone else is dispersed.

Carlos
tree from wh/
GLT feed on Neeta
is
Symphonia
not
Callophyllum

Day 5^{to}
Day 4^{to} M

21 July 85 Mond.

Start day taking Jesse out
to photograph, dam,
Reserve entrance, feed lot
with cattle;

End up at Pedreira and walk
in. Meet Zuke + Elzias
doing obs. + they take us
to Ron Rita + \$

The animals are near the
Pedreira in scrub.
Rita does not. Infant
rasp at me this time.

We go out + I return to house
for gas. Dionizio has arrived.
Spent last week politicking
for GLT conservation.

- ① getting new INARA
land attached to PdA
- ② developing a sub-
delegation for IBDF

Note: Everyone had
colds this trip.
Started with Carlos

→ Zigue
Andy
Hon Ann
Beate

in Silva Jardim, including
more guards to prosecute
hunters in general area
of Silva Jardim.

I take Jessie out to Carlos
study area. He takes
us almost immediately to his
group of 5. [Heavy + light ♂
Heavy & light ♀ + juvenile]

Group began to ~~move~~
immigrated in together +
both males have mated both ♀♀.

Also both ♀ scent mark. *
~~light ♂ female~~ Carlos thinks that
♀♀ may have reversed
dominance when the ^{adult} males
of the group disappeared, and
the new males came in.

Carlos group at baiting station
(3 meters height), then
involved in encounter across
the road involving a
group in Dietz study area.

Jessie gets photographs of

GLTs near the road side; I
get to see some wild GLTs
in an encounter.

The second group has one
pair + 2 infants.

Pick up Beth at asphalt
(#107) and have lunch at
house.

Jessie with Dionisio + Laureny
to photograph maned sloth +
reforestation plots.

I go to Casimiro with Beth
+ Antonio to shop, fix car,
call DC. - ^{give Beth hell + motivate} her to get \$ into account.
I get to write some letters
in the Praça.

Both leaving and
Return^{ing} home, ~~we~~ find fire
near Reserve —

lots of fires set; one possibly
near Reserve boundary.

Ben Beate Andy + Ines to
Pd A for dinner with Beth,
Jesse, J. + LA Dietz,
me, Jessie Chin, +
Laurey + Dionisio!

The 3 chiefs Ben discuss
strategy for the two released
groups.

I declare that we will not
permit any animal to die
of clean starvation.

(Butterscotch is NO group
didn't locomote all, ~~day~~ ate little,
sat on nest box
later ^{Andy} suggested that she might
have aborted since he saw
mogen. licking. — we decide
^{trap} to feed her, if she looks
poorly tomorrow.

We only partly agree about
following procedure; ~~to~~

Conflict between

- ① Training Wichita as fast as ^{we} possibly can & as cheaply
- ② maintaining comparability in post release treatment of 2 groups in order to continue to document differences.

Ben in favor of ① + I ok ②
We discuss it further on
following day & realize that
we disagree on goals & means.

Jim Ben & I talk, drink
Creme de menthe & ~~for~~
finally decide that Ben & I
will talk more. We sit in Jim's
office.
Ines dines home & we all
collapse at Pesage.

Wich	Day	7
N.O.	Day	9

30 July 85 Tuesday

Start day with Wichita group
Working with Elzao + ~~Elz~~
Elizaria. Wich eventually
moves out @ 40 m from
nest box.

Long calling at one point
(later find out that N.O.
was also long calling).

Beate comes to Wich + I
go to N.O. for obs +
nite nite.

Ben had been planning to
trap + feed Butterscotch who
had been looking terrible
yesterday. But when ~~I~~ he
arrived, she looked much
better + was moving with the
group.

Also had begun courting
her son Proke then, following
sniffing, mounting + grooming
him.

Andy thinks that she aborted,
ate the fetuses (some
good calories), and has
begun to feel better.

Ben & I keep disagreeing
about the 2 groups since
I think that Wichita is better - ad
N.O. not as good as his
estimate.

Especially since N.O. & Wich
seem to find as many good
sites & to move equally
far.

Of course, as Ben says,
Wichita has been out 2 days
longer than N.O.

Do nite nite on N.O. They
go into box @ 245 PM &
never come out, but I sit
until 5 PM when Ben shows
up.

Ines & I make dinner at
Pesagro.

big problem with Wichita group. Bees moved into the nest box & they had not yet found a new sleep site.

Ben took ladder pack, talked to Sn Nilo, living at Pasago, & found beekeeper, burned out bees & moved nest box while Beate led the micots around the box with food, so that they would not freak out.

They eventually went to sleep in new box.

Wich Day 8
N.O Day 6

31 July 85 Wed.

Do good morning wake-up on N.O. Must be there by 0600 hours.

Fifteen minute walk from the lab along the road.

I have diarrhea and nearly cannot hold out until the animals emerge from the nest box. Then start collecting feeding data until ~~morning~~ Silvia Jardim people arrive.

Ezequiel (Zigue)
Have Mary Paulo & ~~Ezequiel~~ to work with.

Later Jim shows up & the animals are trapped & weighed while I put out the distributed foods.

For feeding we have been using 12 randomly selected sites. Squirrel diet, banana orange & Papaya of 24 compass points (@ 5, 10, 15 m from box)

The animals seem to be
cuing in both on 2 sites
where they found food
previously and on the
yellow flagging which
marks the sites.

Of the N.O. Group, Hera +
Venus (2 young ♀♀) locomote
incredibly well + find
lots of food (Venus micromanipulates
in bark + finds a huge
cricket today). The young ♂
Prometheus moves surprisingly
slowly + continues to be
pursued by his mother Butterscotch.
They and the breeding male Lancelot
are forming a bizarre triad
for grooming + resting, with
the two ♀♀ left out.

Jim finds it harder to
trap the animals than expected
and all have lost weight
from processing.

I still think that Jim +
Bez overestimate their
competence.

cedo - early

Animals seem to need a bit of a forced fix @ $\frac{1}{2}$ hr after awakening. Then the day goes in bouts of feeding followed by resting, and/or micromanipulating for insects. Lots of the resting is done high up by the sun.

We in discussions are finally realizing that altho the raining has resulted in major behavioral differences between the groups, we don't know whether the differences relate to survivorship.

Eg lots of man is good (probably) but the animals must range further + mm less spec site. Rate of searching newsites must increase. They seem to keep working at same sites.

~~XXXXXXXXXXXX~~

Ben runs into trouble w/
Wichita group in that a
group of bees moved in &
took over the nest box

We have dinner at Silva
Gardini at the hotel owned
by Mary's father + Ben Jim +
I discuss the next days
approach.

We decide that the expt.
is over + it is time to stop
feeding distributed foods +
comparing the groups, but
to start provisioning N.O.
+ training and provisioning
Wichita.

13/26

Processing Wghts

	25 July 85	31 July	24hr Food 3 Aug 85
17.1% Lance	764	702	633
14.1% Butt	675	600	580
N.O. 13.2% Prom	668	595	580
12.7% Venus	622	607	543
10.4% Hera	558	520	500

Wichita	Process wghts	23 July 85	29 July 85	30 Aug 85
5.9% Jack	664	618		625
9.4% Pepe	671	601		608
4.0% Maria	628	—		603
4.9% Juan	631	600		600

Wich Day 9
NO Day 7

1 Aug 85 Thurs.

I'm responsible for picking up the Silva Jardim kids in the Corral. They are late and I'm a bit pissed. Their car doesn't start + it appears that I killed the starter motor (already going). The mechanic + Zeke + the kids push started the vehicle and Zeke (Zigue) drove to Pesagro.

I am dismayed by my incompetence in understanding motors and Portuguese + I feel very frustrated.

I spend the day with the Wichita group + Zeke + many.

I get further annoyed + disappointed because they

3 Aug 85
Weights.

N.O. group Venus 543
 Prometheus 580
 Lancelot 633
 Hera 500
 Butterscotch 580

~~N.O. weights - Estimates~~

~~Venus 606
Prom 585
Lancelot 702
Hera 520
Butterscotch 600~~

don't work very hard +
mess a lot, even tho
the observations are boring.
Mary had brought in with her
a book comparable to
Trivial Pursuits and kept
asking zigue questions
which distracted him.

They also didn't try to find
animals when they were difficult
to see and spent most of the
day sitting or laying down.

Jos, Jim, et al come in
and it is very confusing
since all of a sudden
Maria + Wichita leave area of
viveiro + take off to the
SW towards the latrine

I am totally unprepared +
feel further frustrated.
I don't have a flashlight
and do not understand the

trail system at all. ∴
I feel disoriented, + I
don't feel that Zigue +
many either care to or can
keep up with moving animals

One is there, but she + Andy are
getting ready to leave.

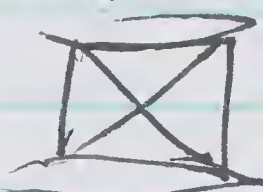
after $1\frac{1}{2}$ hours, close to
dark, Maria leads the
whole group back to the
nest box.

I was amazed at Maria's
sudden movements out. Clearly
looking for something, but
the whole group becoming
disoriented + spending lots of
time on ground trying to
maintain contact. At one point
they spend a lot of time in a
liana-covered tree near a
huge spiny palm, as though
they were going to spend the
night. Maria keeps circling

the same area & eventually
just takes off back to
the area of the viveiro.

Andy & Ines return to the
Reserve with Jim while
Ben Reate & I have dinner
at Pesagro,
Beans, sausage, tomatoes &
palmitos.

Andy just getting cold which
has hit everyone at ~~Reserva~~
Reserva, starting with Carlos
Perez.

Ines Ben & Jim have built
a PMP (Portable Micromanipulation
Platform) for beginning to
train the Wichita group.
composed of  crossed

bamboo sticks with dead wood
at ends. The bamboo
all has holes at uneven
intervals to encourage
mm.

At 1 PM (1300 hrs) we have finished the experimental part of the release, where the two groups are compared, using distributed foods at 12 randomly placed sites at 5, 10, 15 m from Urveiro.

Animals (especially Wichita) group have begun to key into the yellow flag markers indicating where each site is (total 24), and check each previous food site out in the A.M.

Difference in both groups is in locomotor proficiency and micromanipulation rates. New Orleans animals are occasionally finding natural animal food thru mm, but the habitat ~~does~~ ^{does} not ~~have~~ have many bromeliads. Also, their success rate remains low.

The next step involves

provisioning both groups ~~while~~
in the most efficient, cheapest
way possible while training
Wichita. Ben decides to leave
Wichita's training protocols &
experimental design, entirely
to Ores.

Current plan involves

- (1) weighing every 5-7 days on same day.
- (2) feeding animals 100g/day/animal at 5 sites (# animals in N.O.) and 4 sites (" " " Wichita group) usually for one hour between 1300-1400.
- (3) Distributing food where the animals are, but ~~at~~ ^{within} 5 meters of an animal randomly chosen each day.

RATIONAL

Owes animals warning for working
on finding food, but permits
provisioning of hungry animals.

DECISION: No monkey will starve in front of us.

The system permits reducing food provisioning either on a per gram basis or by not provisioning one or two days per week ————— or both.

Pesagro + viveiros:

Pesagro is an experimental station for growing citrus near Silva Jardim.

On it & a neighboring fazenda is a patch of forest about 100 ha. The two viveiros have been placed at opposite ends of the forest. The sites are somewhat different with the N.O. group in a taller forest, with older trees & more palms.

There is little in the forest since many species have been hunted out.

~~Setting~~ The laboratory where we live was built in 1971 & never worked in. Probably built on World Bank or AID money. Jim had it wired for H₂O, but

all drinking H₂O is carted in
from the Reserva — @ an hour's
drive.

Also There is no electricity nor
a fridge, Thus food can't be kept
cold & we survive on canned
food — mostly.

The shower is deathly cold (and
sometimes invigorating) & and also
is only a stream, Thus you don't
get too clean.

Ben & Andy need to pump water
from the well for showers & the
toilet.

It's about a 6 min walk from
the hill where the l.c.b is to the
Wickia viveiro. A wonderful
walk in the early morning before
dawn; very soft & drizzly & still.

I realize that I associate
Brazil with the odor of the
grass in the pastures.

Wichita Ka

NO Day 8

2 Aug 85 Friday

I go out to do the "wake-up" on the Wichita group. Nava's first activity is to check all the yellow flag food sites. The group seems hungry, but eventually hit the top of a sunning tree and rest.

The N.G. group had slept up a hillside, outside of the nest box. It was interesting that both groups started moving out from the nest box at the same time, despite two days difference in release date.

Jim brought Silva Jardim observers in & I realized that I had nothing to do.

So I spent some time walking the trail system & absorbing some material in letters from The U.S.

Bob might have a new job.

Karl E. may have moved back into the house.

[I later have a dream that when I return home, K has moved in, brought lots of

new furniture and sold most
of my furniture).

Ben + I gave Uchuta group
some food in their PMP. Pepe +
Juan mm on incredible
ant. The mm behavior is certainly
locked in + increases arousal level +
activity; even w/o any positive
reinforcement.

I fed N.O. group up the hillside
with Paulo + Mary doing observations.
Feeding ok. altho Hera eats
little, having found $\frac{1}{2}$ orange just
before I feed at 1300.

I return to Reserve to change, to
return to RBPA with Jim.
Sweep floor.

Feel a bit frustrated about
living arrangements + my lack
of Portuguese. Also moving
from Resagio to Reserve
keeps me very disoriented +
disorganized. Packing +
repacking my day pack.

On way to Silva Jardim,
bump into Dionisio (are such
meetings random?) with
a politico from Brasilia
(Delegado from Brasilia office)
looking into the rental of space
for the subdelegacao office
to be developed at Silva
Jardim.

Jim is lectured to by this
man about deforestation & we
finally get away.

He is about 35-40; self important;
with too big a gut; smokes; &
appears to be a political hack.

Not getting Brasilia to agree
to these subdelegation offices
is a really good victory for
Dionisio.

Dinner only with Lou Ann, Jim,
Carlo & Beth.

Laurens back in Rio —

Howser has been a constant problem; I never getting anything done on time.

- 2) Never setting priorities
- 3) Never saying what has been or has not been completed
- 4) Never asking for help when she's behind.
- 5) Not communicating with Jim + Lou Ann about what's happening.

But there have been no major financial disasters yet, altho with Jim bouncing one check, it was pretty close.

J.T.L.A. D salaries

Not opening mail

Duez put \$ 5,000 of own \$.

Not sending account statements.

I'd spoken to him briefly at Pesague about application for the PhD program at George Mason. I also encourage him to apply to U Va + VPI. in biology + environmental sciences.

Henry interviews two people who want work, one a stutterer who traps + sells birds; the other a barefoot black that gave Ben, Greg + Al the creeps.

After dinner Jim + I have one of our long-ranging talks about his future, Carlos, Andy.

We end up straightening out some parts of the budget.

Beth Howser is due to be called tomorrow to see if \$ 18,000 had or will be deposited.

When I had talked with her on Mond. it wasn't clear whether the Duez would have any money at all.

N.O. Day 9
Wichita Day 11

3 Aug 85 Saturday

Drove back to Reserve + picked up observers @ 0715 [Andrera, Elzao, Paulo].

Went into mata late; watched N.O.; then Wichita a bit.

Ben + I trapped animals between 11-1300 hrs. + weighed them.

Veners too ~~hard~~ hungry + comes to trap too easily.

Wichita group has lost on average 5%
N.O. 12%

[estimates]

The difference seems related to N.O. greater locomotor ability, frequency of locomotion, ranging activity.

N.O. are hungrier, move more, but still look O.K.

Jim shows up with Claudio Padua + wife Susanna.

we show them the animals & groups. Ben & Jim excited about showing Claudio the differences. Are foisted by the N.O. groups going into the nest box by 1300 and barely coming out.

Jim takes car & Ben Beate Claudio Susanna & I get ripped in front of the lab on white wine, with Ben eventually making a fire and Beate some dinner.

I am really pleased because I hadn't been able to talk with them before in such a relaxed atmosphere.

They left about 10 PM after talking about his studies on *Chrysopygus* (caught 7 animals), Coimbra, Gainesville (JFE, Robinson, Carlos Perez), xenophobia & conservation priorities.

4 Aug 85 Sunday

NO Day 10
Wednesday 12

went out late [0700] to feed & check animals. Then ~~at~~ cleaned house & packed. Antonio drove us to Silva garden to pick up assistants, beer, meat (for churrasco).

Arrived ^{about} ~~after~~ noon. Promasio's wife, kids, parents-in-law & sub-in-laws there.

Mrs Andy & Zeke are eventually picked up on BR 101 on the asphalt.

There are @ 25 people for churrasco. & we end up cheerful & dancing.

Mukeka — w/ dendé oil

Nugueea

coriander —

dendé oil —

onion / tomato

coconut ~~oil~~ milk w/o sugar

hot pepper

garlic

salt + pepper

don't boil coconut milk —

sauté onion et al. Then add
fish + sauté on medium (don't
overcook) — Then add coconut
milk —

Ensopada

w/o ~~coconut~~ dendé oil.

5 Aug 85

Monday

Up at 4:30 AM and drive to Rio
airport to get flight to Salvador.
Jim exhausted, having been up since
about midnight waiting to get
up. I oversleep + Dietz
wakes me at 4:53 AM when
we are supposed to leave at
0500 hours.

Claudio Padua meets us at the
airport to trade off nitrogen
tanks to arrange for me to take
blood back from chrysopygus.

Jim's drive to Rio airport
was the fastest most dangerous
I had seen — Lots of mist +
trucks ~~stopping~~ leading to Rio on a
Monday A.M.

~~that~~ Flight to Salvador
was @ 1 1/2 hrs.

Drove in on regular bus
Salvador is exquisitely placed
on the tip of the Brazil
bulge. Drive from the airport

to city along beaches that are really exquisite.

But at some point at the Barra, where we end up staying we are on beach by the bay (Baía Todos Santos).

And the water is gentle w/o breakers (I end up having 2 exquisite swims on an "urban" beach which is so calm + perfect for swimming I can't believe it.)

Stay at the Barra Turismo Hotel (7 Setembro Rua). On the beach — altho there's lots of traffic noise until late at night, early morning.

Go from upper to lower city + have lunch at the Mercado. Then spend \$ at the market + get very cranky.

At night visit

folkloric center with restaurant (SENAC) in very old part of town. School for training people in restaurants but they do folk lore show — which isn't that good.

Salvador v. different from Rio — Bahians are apparently friendly —

Also, visited 2 churches (moldy 'churches' — according to Dietz) — São Francisco with a monastery + a lay church next door where lay brothers skeletons were buried in a crypt in a basement + the front was a baroque 'y' style.

Had to take ~~the~~ taxi home Bargained with 3 drivers

(cost 6000 C3 [\$0.75] during day — after dinner they wanted 25,000 C3.

We climbed into VW bug +
made at home.

Raining much of day!

Dinner includes 40
dish buffet.

Tues 6 Aug 85

Up early and walked about
40 min. beyond Salvador
lighthouse.

On AM lots of activity
with early morning exercisers +
people going to work.

After breakfast, beach +
swim until rain started.

Then spent more \$ in
artisan shop until time for
IBDF interviews (which Jim
had been organizing).

Picked up at 1615 by IBDF
driver + taken to headquarters.
Head of Delegação of
Bahia

Orlando Sampaio Passos

Beautiful modern office with
Brazilian mural on wall
depicting, Gauguin-like
forest.

We are there to meet w/
press + discuss the GLT
reintroduction and to
observe + advise the Bahians
① the chrysomelas situation

Jan + Ben + I have
already discussed need to
emphasize observation +
consultation + not concentrate
on reintroduction.

During interview w/ 3 reporters
+ Orlando, Orlando emphasizes
the importance of conservation
+ preservation + the need to
be thoughtful + not assume
single solutions

Interviews going but OK.

Having dinner at restaurant
on street to left of lighthouse
along street recently restored
call Ki Mukukka -
Food incredibly good!

Wednesday 7 Aug 85

Had early AM swim, breakfast
back to shop to spend more money,
and to airport to fly to Ilheus.
Flight late + we land in Ilheus
② 13⁰⁰ hrs.

Picked up by Saturnino + Wilson.
Saturnino is Director of Reserve
at Una.

We drive to Reserve.
SUMMARY OF UNA:

Reserve is over 5,000 ha, but
in 2 unconnected parts.

☐ The top part has
some decent forest
☐ no hunting pressure,
headquarters +
has little problems. The
Southern half has ~ 60 families
as squatters. Getting rid
of squatters is worst problem
facing Reserve. Good forest
is about 2700 ha.

IBDF needs to pay off
improvements made by ~~IBDF~~
squatters. Estimates for

paying off squatters varies.

IBDF's appraisal is \$250,000
(but squatters may ask for
more)

Saturnino says that he could
clear 80% of the squatters
out with \$111,000, but it
would have to be done quickly.

Saturnino also says that it is
cheaper in the long run to remove
squatters than to buy other
forest patches since cost of
land in the area is very high:
very good agricultural land.
2 million cz / ha (exchange
8.400 / \$)

\$286.00 / ha.

IBDF has \$50,000 to remove
squatters — But there
is also \$45,000 in hands
of FB CN from

WWF International whose
purpose is to do something
for chrysomelas. JD says
that origin + function of the
money is unclear, but
that it is sitting w/ no
apparent goal.

JD & I both think that
using the money to eliminate
squatters is the way to go.

Reserve facilities: Include

Director — Saturnino

young biologist from Salvador,
been director for @ 1 year.
Visited PdA for week to
observe organization of PdA.
Saturnino @ 25; lives in
Una (@ 14 km), but a
trip that takes much longer
since road in Reserve
is difficult.

(CEPLAC will be
paying to pave some part of
road leading from asphalt to
Reserve.)

Techurcian - chief guard: ~~the~~

Wilson - who stays with
us on all trips around
Reserve w/ Saturnino.

There are additionally 6 guards,
1 4WD vehicle / which ~~requires~~
~~light~~ goes 3.5 km/liter of
gas (jeep)

1 VW bug which negotiates
Reserve roads reasonably well.

They also have 8 horses for patrolling,
including 4 which remain at the
southern end of the Reserve w/
the heavy squatter influence.
Saturnino has instituted heavy
patrolling to reduce additional
inroads by squatters.

Gate of reserve exists w/ sign.

They want to build guard
house at gate to turn back ppl
with no business there.

Headquarters about 4 km

from gate. Includes 2 houses,
one w/ office, kitchen + 3
extra bedrooms [cement]

Another (wooden) with 2
bedrooms, kitchen + bathroom.
[Apparently used by guards].

Larger house has porch +
small viviers in back holding
young ♀ captive chrysomelids,
which was confiscated and
is ~~to~~ destined to be sent to
Carmen Alongo in Paraíba who
maintains some captive callitrichids.
Captive ♀ has rickets-like problem,
w/ little ability to climb or
walk; ~~but~~ right hind leg
barely motile.

They have ready access to good
water thru a lovely river below
the houses. We later
see a water-driven pump
which brings the H₂O @
800 m from their dam

and pump up to the houses. Saturnino hopes to pump H₂O up to a new guard house at the Reserve's entrance @ 3 km away.

Kitchen + bathroom facilities look really good + clean + useful altho they don't have pots + pans + Saturnino complained bitterly @ lack of money for small things.

No electricity, but the 2 houses would be perfectly workable for a research project. Entry road off main asphalt is terribly eroded now, but is to be paved by CEPLAC.

Reserve has good trail system, used by guards on horseback.

Apparently there is some urgency to paying off squatters. They have been prohibited from planting for the past year + are threatening to start planting crops again.

Reserve not yet completely fenced. To get from headquarters of Reserve in Northern sector to region with squatters is nearly a five hour return trip drive due to bad roads.

There are GHT in the area + some decent forest. But roads are v. bad.

Estimated to be 60 families in Reserve. Little hunting pressure in the N. sector where there are few people.

Saturnino thinks that the land near the Reserve has considerable decent forest remaining.

~~Important~~ AGRICULTURAL USE:

- ① Cacao: The biggest crop in the region in which only the understory of the forest needs to be cut and tall emergents left to provide shade for young cacao. Cacao only begins bearing fruit after 5-6 years, but may live for 90 years.

Shade may be provided initially by banana trees. Older cacao doesn't need as much shade.

② Rubber - clearcutting done for rubber. Seems to be increasing in frequency compared to cacao which has been around for hundreds of years.

Land planted in cacao not considered mata by IBDF. Thus owners still need to maintain 20% land in mata.

Fire no problem except on edges of reserve.

Both cacao + rubber plantations use insecticides; especially cacao which altho looking like forest is in poor shape because micro fauna is destroyed.

GHT apparently coexists w/ cacao.

GHTs - Are seen regularly by guards in groups ^{sometimes} larger than 10.

Saturnino indicates that group size averages 8 (seen groups of 11, 12, 2). GHTs often seen crossing roads and in scrubby-looking 2nd growth - more than "climax" forest.

Saturnino has had several confiscated and released into the reserve.

We later see a "wild" chrysomelas approach the viveiro w/ the captive: likely to be released animals.

Reserve also has 3 other primates: Cebus apella Xanthosternis (seen at CPRD)

Callicebus kuhlii:

Callicebus personatus:

(according to ~~the~~ Rylands: Reserve Director only mentions 2 species)

Also 2 canids, agouti, paca are common. They have deer, peccary and more birds than are normally seen at PdA. Also manded sloth + two (2) other sloth species.

Saturnino has no idea how many animals in the Reserve. Still

* Saturnino not very knowledgeable @ plants + animals in Reserve.

has periodic problem of confiscated animals, but frequency of animals being available for confiscation is declining. Saturnino knew of few animals at the time.

Previous individuals have mostly been released and S. doesn't want either to continue releasing animals or to turn into a holding facility. He doesn't have logistical support necessary.

Renato ^{lead} had personally recommended that CEPLAC (Cacao growers) support building a holding + breeding facility for animals to be reintroduced. CEPLAC apparently agreed to land + construction but not salaries for vets + keepers. Project proposal died.

The GHTs in Peru have occasionally brought in wild groups thru long calling. S. recently had 5 GHTs in ¹ cage which attracted larger group.

Dinner 1st night at town of Una. An incredibly good magueca! with lots of cereja.

Thursday August

Walked thru Una beginning @ 07³⁰ - Continued thru about 1500 hrs. Estimate that we walked about 10-12 mi. I took all my photog. equipment with me wh/ eventually caused real grief since we were walking up + down hills and had to cross rivers/streams on logs 3 times.

We all observe group of *Cebus apella xanthosternis* which Beck identifies + gets good look at.

~~C~~ The first part of the forest looks very young. Thin tall shaggy trees w/ few cross supports on lianas. Saturnino keeps saying that he thinks it unlikely that the forest had been cut in the past due to lack of a decent road system. Jim finds several ~~cut~~ trunks which must have been cut.

As we move thru Reserve forest type changes with better - looking larger dbh trees. Also forest looks

incredibly more complex than P d A with a vast profusion of bromeliads of every type of every size. Rylands had discussed sizes & heights of bromeliads in Una wh/ I would make a superb comparison w/ P d A.

Don't see many animals in the mata during our walk but the forest does appear very rich & complex altho not as old as I would have expected.

likely to have had selective logging in the past.

Much of our walk is along the Reserve boundary bordered by a fazenda. I with some squatter problems.

The walk has its moments with Deetz Saturnino & Wilson doing balancing acts across rather wide rivers via a set of logs. Ben prefers to go across on his rump.

As do I for some of the crossings. Lou Ann's balance is incredible [They say from square dancing], but some of Jim's activity involves "macho"ing - it out w/ The Reserve Director.

Some of the causes of the differences in forest types both w/ in Una & in comparison with P d A are probably due to

- (1) Richer soil - Una is in a rich agricultural area.
- (2) Degree of prior abuse of land. Probably less continuous abuse at Una.
- (3) Closeness to sea. Una very close
- (4) Slope of hill & temperature & light differences.

The forest at Una changes ~~imperceptibly~~ perceptibly; frequently. Thus ~~in~~ within 20 m, you may go from forest w/ any reasonably old looking,

large dah trees to forest with
trees of considerable size.
Only saw 2 or 3 huge
buttressed fig trees during
walk; have never seen even
one at P d A.

Return to house we find "wild"
GHT nearby. Also woman &
child who wash off our boots &
wash ~~Ben's~~ Ben's pants.

Dinner in town at the only Uru
restaurant w/ more miguéca.

FRIDAY 9 Aug 85

Leave early with Jim &
Saturnino to go to Itabuna
to meet with CEPLAC administrators.
It takes 3 drives in + out to
get everyone + their luggage
out of the Rese.

On way to CEPLAC headquarters
Saturnino asks about

- ① \$ for squatters
- ② \$ + best mechanism for dealing
with compromised captives
- ③ doing research in Uru
I tell him that we couldn't
easily or quickly come up
with money to pay off squatters.

And that research studies would
take better than a year to
put on the ground. No quick &
easy solution.

Jim & I arrive at IBDF &
pick up Noe who is the

liaison between IBDF + CEPLAC.
He joins us on the visit to
CEPLAC.

Headquarters are large modern
expensive-looking with guards
at entrance.

We wait for > 1 hr to
see our people + eventually
Ben, Lou Ann, etc. arrive.
And we all troop in to talk
with the CEPLAC regional
coordinator + one of their
agronomists.

Jim makes our case that
~~suggests~~ GHT is endangered,
unique to Bahia, should
be conserved + that its
conservation is impossible
w/o CEPLAC's active
involvement + support.

I ~~ask~~ ask him to emphasize
~~that~~ that if we can support
both preservation of mata
+ species conservation

while undergoing development
that it might be a unique
opportunity for conservation
+ development interests to show
that they can co-exist.

Also a reporter present from
their ~~newspaper~~ newsletter wanting to
know why we were there.
We requested that CEPLAC
survey the owners of cacao plantations
concerning available forest +
known populations of *L. chrysomelas*.

CEPLAC "barons" appear
interested in cooperating. They
already knew of the work
with Rosalie near Rio. In fact,
Saturnino + the CEPLAC people
indicated that some people
~~thought~~ confused Rosalie w/
chrysomelas. I think it's
hardest for these people to
understand that they are
responsible for something
uniquely Brazilian.

Noé drives Jim & me
an entourage of cars
then CEPLAC explains
something of their research on
cacao growing. There is
one site of undisturbed
forest. One plot with
80 year old cacao that
hasn't been touched in
25 years.

He shows us where they
extract cacao processing.
Fruit stays in vats covered
by flies — rotting essentially —
for @ 5 days & then they
dry the seeds/bears in
the sun, much like coffee.
Brazilians produce an
incredible amount of cacao
across the country, but
eat little chocolate.

CEPLAC runs the
equivalent of an ag. extension
service with 400 administrators/
700 technicians based in
nearly every small farming town.

An incredible way to reach
Brazilians @ conservation!

In region there are ~ 96 regional
extension offices derived from
cacao industry. Their purpose
to reach people on the
methodology of growing cacao
while maintaining environment.

I find Noé annoying. He talks
constantly about CEPLAC & is
paid by them, but he is supposed
to work for IBDF. Jim says
that he is at a game warden level
educationally. Before Saturnino
was hired Noé was responsible
(so it seems) for dealing with
confiscated animals. He claims
to have broken a big smuggling
ring wh/ was selling animals
(including GHTs) to dealers
in Rio & São Paulo about
18 mos ago.

Discussed having a hairy
eagle in a cage at a felling

station. Caught about ¹⁶ 16 HT
about 18 mo^o which he
released 14 animals into
The Reserve.

He also spoke of some *Callithrix*
kuhlii which he released at the
CEPLAC headquarters' untaxed
forest plot. I get the
impression that he has little
understanding of conservation &
is release crazy.

Ben & I are nervous
because he talks non-stop &
claiming that he is taking us to
The Ilheus airport on time for
our flight to Belo Horizonte.
Of course we don't leave

CEPLAC until @ 11:45 AM,
and our Belo flight was
due to leave at 12¹⁵.

As it turns out we barely
make the flight, and the
VW bug holding half

our luggage breaks down
on the way to airport &
everything & everyone gets
stuffed into Saturnino's vehicle.

Stay at Hotel Amazonas in
Belo where I stayed previously
for Primate Congress.

Flew into lovely new Belo
airport @ 45 drive from
town.

Visit handicraft shop &
Then to BASTOS to buy some
stones. I am not prepared
but find that I still decide
to spend > \$400 but don't
really get exactly what I
want.

Ben & B. spend about \$1000
w/ Ben buying Beate a \$250
heart-shaped amethyst with
a line of yellow citrine behind
it.

Eat at good German restaurant
near hotel (@ 1 block away)

Alpino Restaurant.

10 Aug Sat.

leave Belo early + at at
his airport agreeing on the
strategy for our report
to IBDF.

Taxi to Berant's: Look at his
animals. Apparently he was
recently offered 2pr + 15 →
rosalia + The rumor
is that some animals were
tattooed.

Lovely lunch —
chicken liver pate +

Tahiti fish — like ceviche,

Tuna or bonito
chopped tomato + carrots
lime
onion
coconut milk

To the airport by 1800
to meet Ores, Andy,
Claudio Padua with liquid nitrogen
tank of blood.

① Mammals as Reserve

Doing fine. New Orleans
has been moving far, but
are still tied to supplement
feeding. Neither group slept
out of ~~the tank~~ since
we've been gone. Ines
started her experimental
work w/ Wichita but is
about to start working
with distributed food
since the group is aggressive.
Pepe + Juan keep kicking
everyone off the platform.

② Claudio Padua arrives
with man named Jim
Ellis — graduate

student of John Robinson from
Univ. Gainesville, working
in Latin American Studies
Program on Master's, looking
at organization, structure,
animals, etc. in Brazilian
zoos.

③ Pan Am agent notes that
my flight reads 30 July
even though it's 10 Aug.
I spend 3 hours
worrying about not getting
out because of ticket &
because I'm carrying
liquid nitrogen tank →
Finally end up flying
1st class to NYC for
first time.

Potential for CEP LAC
assistance

- ① ID forest & soil types
w/ agronomists &
botanical specialists.
- ② Provide info. on long-term
changes in rainfall
tempers.
humidity
- ③ Provide info on history of
agriculture in the region;
especially w.r.t. selective logging
[CEPLAC been in existence
about 25 yrs].
- ④ Encourage them to play similar
role to Roberto Marinho Idm
in Rio. Produce TV spots
on conservation & plaster
CEPLAC's name all over.
- ⑤ Encourage CEP LAC to exert
leadership in conservation coexisting
with sensible development, at
international level. w/ international
recognition.

CEPLAC can provide
land, vehicles, logistical support,
construction but is apparently
unwilling to support salaries.

Dietz suggests for fundraising
to support elimination of
Uma squatters - going
to international chocolate
companies

Hershey's, Nestle's, Tobler
etc.

Look for single large donors.

send Saturnina
GLT management +
breeding protocols.

402 ~~402~~
505

none

IM 632-150 5101-8

chamar
carta

international credit card
cartão de crédito

~~202-673-4825~~

send Berant
callitrichid
volume

FONTZ \$ (Senior Assistantship)
due 2 Sept

Lon Ann Support

\$ 9,000

Andy Baker

SI Fellowship

\$18,000 Jim

memo FONTZ proposals: completed by 24 Aug.
Bemischke wants paper

Jan 16 "Riverbanks Zoo talk"
instead of 14 Jan.

Elise: Bad dream that Karl had moved in +
sold all my furniture.

Paul needs my arrival time.

Call Bob + give him my best; I hope
his interview was OK.

Tell Bob to take my car to
airport in case B+B
need lift. If convenient.

Tell Judith that I'm
bringing in blood

call Jake + tell him that Jack
on 11 Aug is complicated + to call Elise
+ tell her where I can find him.

GLT budgets

Osborne computer - for Andy

Lisa Forman

has enough to do isozyme
study

will mitochondrial DNA
study be worth it?

① Can O'Brien's lab handle a
lot of samples.

② will we get much more
data.

③ Is Lisa capable of doing
the ~~isozyme~~ mito. DNA?

NO: wait till next year
Feb.

on her own money if she wants
Trapping in August.

Last 2 weeks in Sept. Jim getting
ready to leave.

~~White Beater~~ ~~check~~

Write Bahians with thanks

~~Have Page bring ~~Science Diet~~
material to Dietz or
equipment for Laurence~~

~~Have Judith send Dietz
① all legislation on
Endangered Species
and
CITES -
all specialized legislation
② Case book by FWS on
US Endangered Species Act
case studies of what to do
if you wanted to do
something~~

~~CRMA +
Management
Agreement +
Management
Protocols.~~

~~main
members~~

③ Get Dietz Terborgh's
Book
send with Page or
separately —

To Do

① Chk on Carlos Laurence
Ruotak Receiver Send Laurence's
Mono or binocular reprints
Infrared

② Can Page take them down?
Page needs car —

Can Page bring

Jeremy Makenon ask Jeremy to put
Claudio Padua on
① Int. Mgmt Comm. chrysomelids
for Murgini - consultation @ ex
CPRT + Develop diet. office
Glander / Katie Wilton /
Utahick /

② Ines into Jersey School
Can she get a scholarship?

③ Send Carlos reprints
GLT etc. to Gainesville
FL State Mus % J. Robinson

Write Mittermeier letter
re: Murgini Internat Comm

When ^{real}
Theoretical / death is seen
Characteristics
85% body weight

No locomotion

diarrhea ↗
vomiting ↘
excessively

head nodding

100% feed Science / banana /
for 2 days.

in trap separate from group

Drop
Stop feeding when
weights stabilize

Can you train in Brazil in mate?
Or are you just going
to supplement & let
behavior develop in young.

Do we watch animals knowingly
starve to death.

① Document differences

Days 6-10

mm

locomotion

EN vs EP

sites exploited:

~~ratio of~~

success rate

mm / # EN.

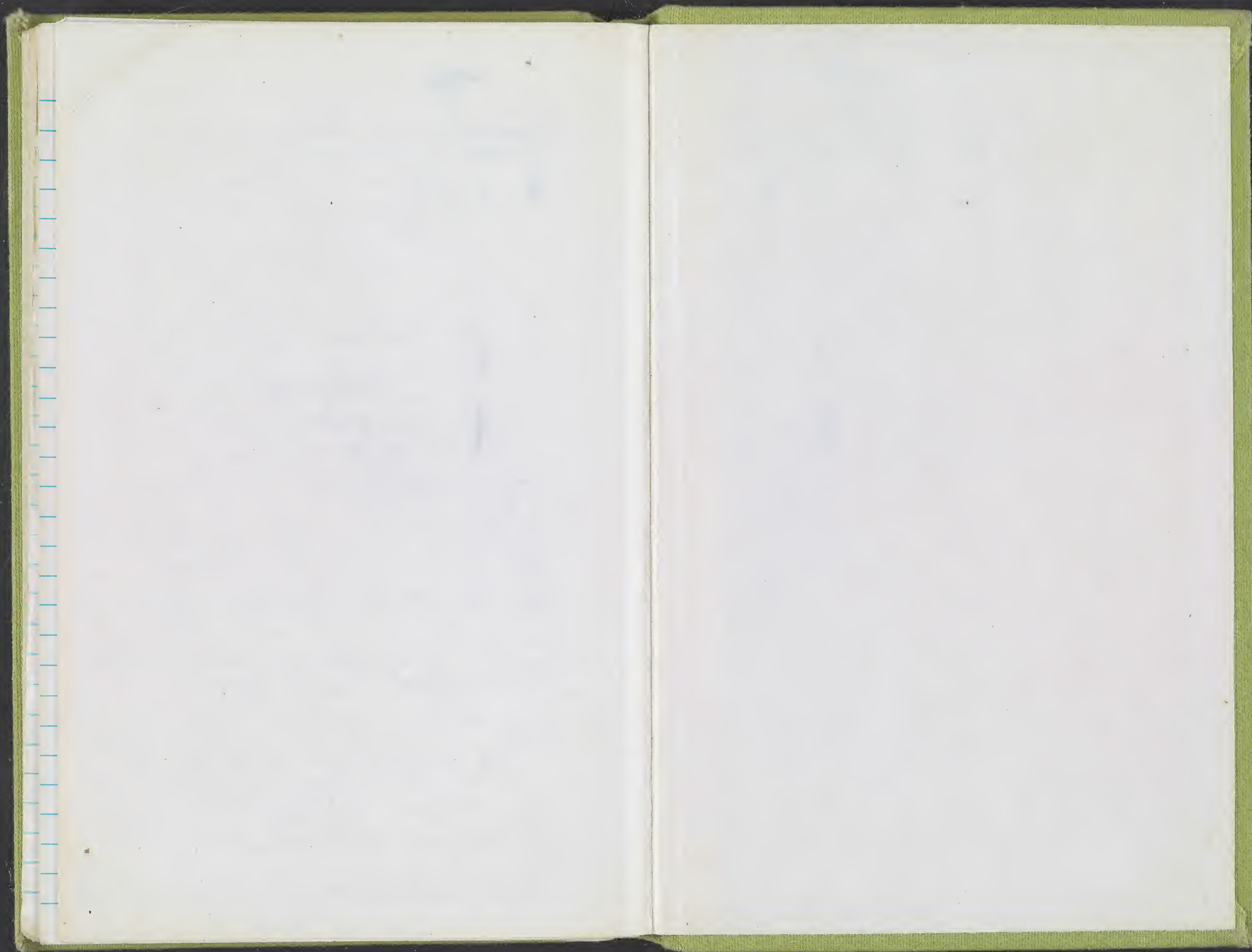
check weights Day 5/6
" " Day 7/8

Day 9/10

② Then feed ^{+water} daily @
2PM wherever they are
in embedded - distributed

way — try to reduce human
impact.

③ ~ 80% requirements or
④ for 5/7 days



100